

**ANNUAL YIELD AND SELECTED HYDROLOGIC DATA
FOR THE ARKANSAS RIVER BASIN COMPACT
ARKANSAS-OKLAHOMA 1992 WATER YEAR**

By C.S. Barks, R.L. Blazs, and S.T. Tuschner

U.S. GEOLOGICAL SURVEY

Open-File Report 93-171

Prepared in cooperation with the

**ARKANSAS RIVER COMPACT
COMMISSION ARKANSAS-OKLAHOMA**

Little Rock, Arkansas
1993

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director



For additional information
write to:

District Chief
U.S. Geological Survey
2301 Federal Office Building
700 West Capitol Avenue
Little Rock, Arkansas 721201

Copies of this report can be
purchased from:

U.S. Geological Survey
Books and Open-File Reports Section
Federal Center
Box 25425
Denver, Colorado 80225

CONTENTS

	<i>Page</i>
Abstract	1
Introduction	1
Purpose and scope	1
Definition of terms	1
Computation of annual yields	4
Selected references	7
Hydrologic station records	8

ILLUSTRATIONS

Figure 1. Map showing Arkansas-Oklahoma Arkansas River Basin Compact area and subbasins	2
---	---

TABLES

Table 1. Annual yield and deficiency for the subbasins for the 1992 water year, as defined in the Arkansas River Basin Compact Arkansas-Oklahoma	5
2. Actual runoff from the subbasins for the 1992 water year	5
3. Annual depletion caused by major reservoirs for the 1992 water year	6

CONVERSION FACTORS

<u>Multiply</u>	<u>By</u>	<u>To obtain</u>
inch (in)	25.4	millimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
acre	4,047	square meter
	0.004047	square kilometer
square mile (mi ²)	2.590	square kilometer
cubic foot (ft ³)	0.02832	cubic meter
acre-foot (acre-ft)	1,233	cubic meter
	1.233x10 ⁻⁶	cubic kilometer
cubic foot per second (ft ³ /s)	28.32	liter per second
	0.02832	cubic meter per second
ton per day (ton/d)	0.9072	megagram per day

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = 1.8 \times ^{\circ}\text{C} + 32$$

ANNUAL YIELD AND SELECTED HYDROLOGIC DATA FOR THE ARKANSAS RIVER BASIN COMPACT ARKANSAS-OKLAHOMA 1992 WATER YEAR

By C.S. Barks, R.L. Blazs, and S.T. Tuschner

ABSTRACT

The computed annual yield and deficiency of the subbasins as defined in the Arkansas River Basin Compact, Arkansas-Oklahoma, are given in tables for the 1992 water year. Actual runoff from the subbasins and depletion caused by major reservoirs in the compact area also are given in tabular form. Monthly maximum, minimum, and mean discharges are shown for the 14 streamflow stations used in computing annual yield. Water-quality data are shown for 14 water-quality stations sampled in the Arkansas River Basin.

INTRODUCTION

In 1955, the Congress of the United States granted consent to Arkansas and Oklahoma to enter into a compact for the apportionment of the waters of the Arkansas River and its tributaries as they affect the two states. An Arkansas-Oklahoma Arkansas River Compact committee was created with a Federal Representative acting as chairman. After research and deliberate negotiations had been completed, both states approved the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972. To meet the requirements of the Compact, stateline yields of the Arkansas River Basin are determined at the end of each year.

This report was prepared by the U.S. Geological Survey in cooperation with the Arkansas River Basin Compact, Arkansas-Oklahoma, Commission. Stream- flow data and water-quality data were furnished by the U.S. Geological Survey. The U.S. Army Corps of Engineers, Tulsa District furnished data from the Webbers Falls, Tenkiller Ferry, Robert S. Kerr, Wister, and Fort Gibson Lakes.

PURPOSE AND SCOPE

The purpose of this report is to present the annual yields and deficiencies computed for the 1992 water year for subbasins in the Arkansas River Basin as defined in the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972. The report includes data from 14 streamflow stations and 14 water-quality stations sampled in the Arkansas River Basin during the 1992 water year. The area included in the Compact is shown on figure 1.

DEFINITION OF TERMS

The following terms used in this report are taken from Article II of the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972.

The term "Arkansas River Basin" means all of the drainage basin of the Arkansas River and its tributaries from a point immediately downstream from the confluence of the Neosho River with the Arkansas River (fig. 1) to a point immediately downstream from the confluence of Lee Creek with the Arkansas River, together with the drainage basin of Spavinaw Creek in Arkansas (fig. 1), but excludes that part of the drainage basin of the Canadian River upstream from Lake Eufaula Dam.

The term "Spavinaw Creek Subbasin" means the drainage area of Spavinaw Creek in the State of Arkansas.

The term "Illinois River Subbasin" means the drainage area of the Illinois River in the State of Arkansas.

The term "Lee Creek Subbasin" means the drainage area of Lee Creek in the State of Arkansas and in the State of Oklahoma.

The term "Poteau River Subbasin" means the drainage area of the Poteau River in the State of Arkansas.

The term "Arkansas River Subbasin" means all areas of the Arkansas River Basin except the four subbasins described previously.

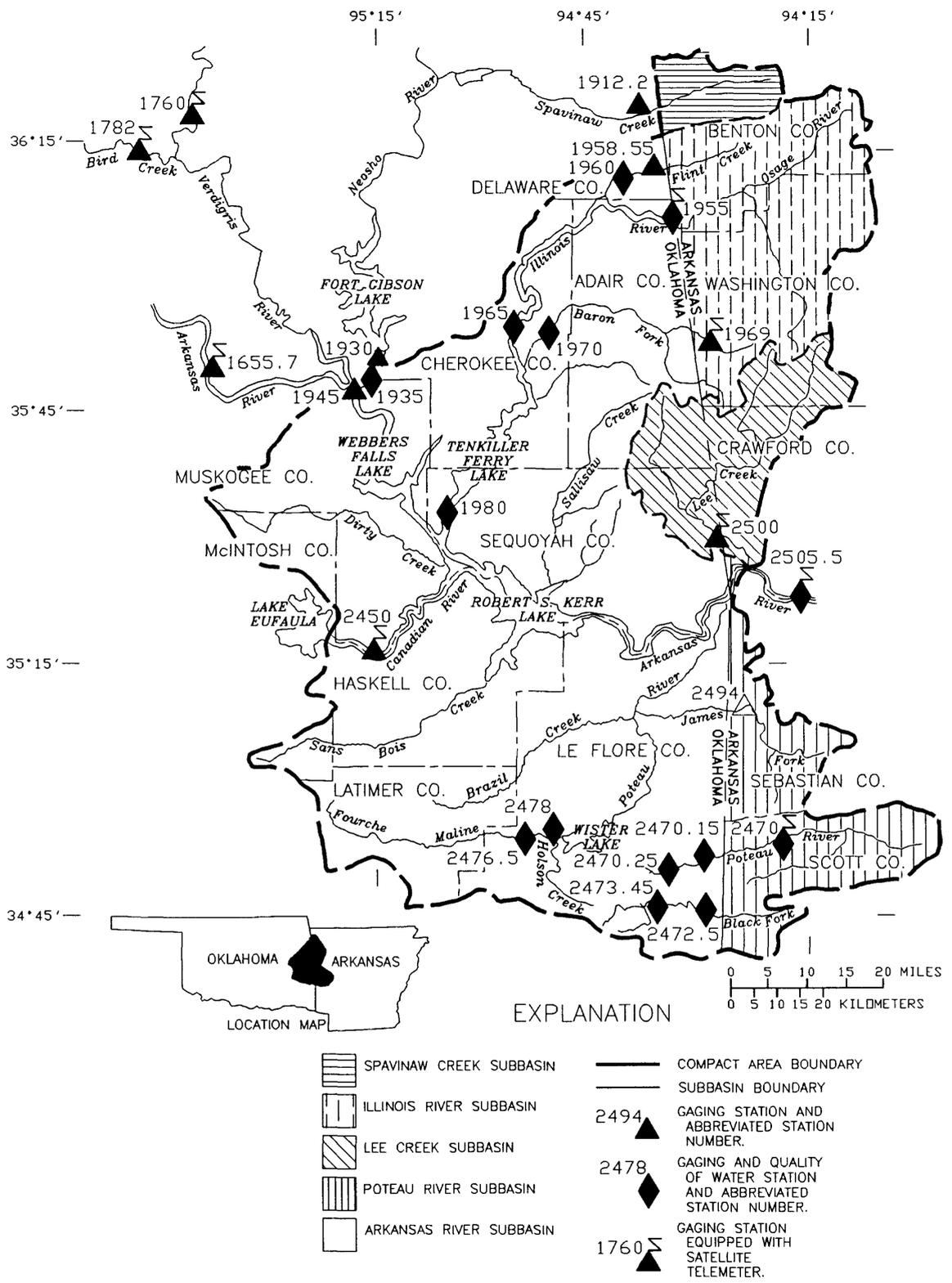


Figure 1.--Arkansas-Oklahoma Arkansas River Basin Compact area and subbasins.

The term "water year" means a 12-month period beginning on October 1 and ending September 30.

The term "annual yield" means the computed annual gross runoff from any specified subbasin. The runoff would have passed any certain point on a stream and would have originated within any specified area under natural conditions, without any manmade depletion or accretion during the water year.

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below.

Acre-foot is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Fecal coliform bacteria are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all the organisms that produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters (mL) of sample.

Fecal streptococcal bacteria also are present in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as grampositive, cocci bacteria that are capable of growth in brain-heart infusion broth. These bacteria also are defined as all the organisms that produce red or pink colonies within 48 hours at $35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ on KF-streptococcus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Code numbers have been assigned for agencies collecting and analyzing samples, and are listed in water-quality tables of this report as follows:

1028 Oklahoma District, WRD, U.S. Geological Survey
80513 Arkansas District, WRD, U.S. Geological Survey
80020 National Water Quality Laboratory, WRD, U.S. Geological Survey.

Contents are the volume of water in a reservoir or lake. Unless other-wise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Cubic foot per second is the rate of discharge representing a volume of 1 cubic foot passing a specified point during 1 second.

Discharge is the volume of water that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a particular instant of time.

Mean discharge (Mean) is the arithmetic average of individual daily mean discharges during a specific period.

Dissolved refers to the material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved oxygen content of water in equilibrium with air is a function of atmospheric pressure and temperature and the dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant effect. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water of some streams.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream upstream from the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas within the area, unless otherwise noted.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour period.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed), expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge by milligrams per liter by 0.0027.

Sodium-absorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Water varies, in respect to sodium hazard, from that which can be used for irrigation on almost all soils to that which generally is unsatisfactory for irrigation.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids concentration of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing past the gage in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff", as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total". (Note that the word "total" does double duty here, indicating that the sample consists of a water-suspended-sediment mixture and that the analytical method determines all of the constituent in the sample.)

COMPUTATION OF ANNUAL YIELDS

The annual yield and deficiency (table 1) for each subbasin were computed as described in Appendix I to the Arkansas River Basin Compact Arkansas-Oklahoma, 1972, supplement No. 1. Actual runoff for the subbasins (table 2) was computed as described in the Compact except for the stations Arkansas River at Muskogee, which has been discontinued, and Arkansas River at Van Buren, which has been moved 7.9 miles downstream.

Table 1. --Annual yield and deficiency for the subbasins for the 1992 water year, as defined in the Arkansas River Basin Compact Arkansas-Oklahoma
[Flow in cubic feet per second]

Subbasin	Actual runoff from the subbasins	Total depletions or accretions (-)	Annual yield	^a Percent depletion allowed	Minimum required flow	^b Deficiency
Spavinaw Creek	96.4	^c 0.4	96.8	50	48.4	0
Illinois River	791	^c 573	1,364	60	546	0
Lee Creek	623	^c 0.2	623	100	0	0
Poteau River	653	^c 2.8	656	60	262	0
Arkansas River	7,418	198	7,616	60	3,046	0

^aDefined in the Arkansas River Basin Compact, Arkansas-Oklahoma, 1972.

^bThe amount the actual runoff is less than the minimum required flow.

^cBased on 1991 water year water-use data..

Table 2. --Actual runoff from the subbasins for the 1992 water year
[In cubic feet per second; D.A. = drainage area]

Month	^a Spavinaw Creek D.A. = 135 mi ²	^b Illinois River D.A. = 744 mi ²	^c Lee Creek D.A. = 464 mi ²	^d Poteau River D.A. = 536 mi ²	^e Arkansas River D.A., = 4,553 mi ²
October	19.7	543	561	1,120	5,943
November	123	1,570	1,280	1,450	14,706
December	221	1,780	1,400	2,260	14,785
January	67.9	625	496	660	6,795
February	116	612	400	321	3,374
March	58.9	366	473	327	3,360
April	104	435	478	148	5,371
May	73.8	567	463	125	6,442
June	247	1,360	1,140	991	13,657
July	50.5	533	336	110	4,544
August	47.9	792	350	17.6	3,361
September	32.8	319	98.8	293	6,763
1992 water year	96.4	791	623	653	7,418
1992 water year (acre-ft)	69,800	573,000	451,000	473,000	5,374,000

^aIncludes 31 mi² ungaged.

^bIncludes 63 mi² ungaged.

^cIncludes 38 mi² ungaged.

^dIncludes 125 mi² ungaged.

^eComputed by subtracting drainage area at Arkansas River at Muskogee, Canadian River near Whitefield, Illinois River Subbasin, Lee Creek Subbasin, and Poteau River Subbasin from drainage area at Arkansas River at James W. Trimble Dam, near Van Buren, Arkansas.

Annual depletion caused by major reservoirs (table 3) was computed for the four major reservoirs in the basin as described in Appendix I to the Compact. Depletions caused by small reservoirs and minor diversions for municipal and agricultural use are considered by subbasins in table 1.

A compilation of the areas and capacities of lakes and ponds in Arkansas, updated in 1981, conducted by the Arkansas Soil and Water Conservation Commission was used to evaluate depletions caused by small reservoirs in the Poteau River, Lee Creek, Spavinaw Creek, and Illinois River subbasins. Analysis indicated that their impact on the depletions in any subbasin, except Illinois River, was probably insignificant. Information on depletions continue to be gathered in order to reevaluate their present impact.

Streamflow data used in the computations are given in hydrologic station records (p. 8 to 42). The station description under "Remarks" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the actual discharge, "good" means within 10 percent, and "fair" means within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Table 3. --Annual depletion caused by major reservoirs for the 1992 water year

Reservoir	Year-end contents (acre-ft)	Change in contents in water year (acre-ft)	^a Precipitation on reservoir surface (inches)	^b Evaporation from reservoir (inches)	^a Diversions (acre-ft)	Depletion (acre-ft)	Depletion (ft ³ /s)
Webbers Falls	157,600	-4,000	56.85	47.47	0	+9,100	+12.6
Tenkiller Ferry	647,600	+18,300	59.23	35.49	6,220	+27,000	+37.3
Robert S. Kerr	524,800	+7,700	48.22	43.79	0	+48,100	+66.4
Wister	102,000	+52,280	65.25	34.61	6,154	+59,350	+81.9

^aFrom U.S. Corps of Engineers, Tulsa District.

^bAdjusted for pan coefficient of 0.70 (from Wisler and Brater, 1949).

SELECTED REFERENCES

Arkansas River Compact Committee, 1972, Arkansas River Basin Compact Arkansas-Oklahoma, 1972, with Supplemental Interpretive Comments, Supplement No. 1: Austin, Texas, 31 p.

Arkansas Soil and Water Conservation Commission, 1981, Arkansas State Water Plan - Lakes of Arkansas, 157 p.

Wisler, C.D., and Brater, E.F., 1949, Hydrology: New York, John Wiley & Sons, Inc., 150 p.

HYDROLOGIC STATION RECORDS

STREAMFLOW

07165570 Arkansas River near Haskell, Oklahoma

LOCATION.--Lat 35°49'15", long 95°38'19", in SW1/4NW1/4, sec.32, T.16 N., R.16 E., Wagoner County, near left downstream abutment of old bridge downstream from State Highway 104, 2.0 mi east of Haskell, 23.5 mi upstream from Verdigris River, and at mile 483.7.

DRAINAGE AREA.--75,473 mi², of which 12,541 mi² probably is noncontributing.

AVERAGE DISCHARGE.--20 years, 9,387 ft³/s.

EXTREMES.--June 1972 to current year: Maximum discharge, 259,000 ft³/s Oct. 6, 1986; minimum daily, 87 ft³/s Sept. 13, 1988.

REMARKS.--Records fair, except for 858 mi² intervening area. Flow regulated by Keystone Lake, 55.1 mi upstream. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	74,943	6,290	953	2,418	148,600
November	131,170	8,720	1,520	4,372	260,200
December	267,660	23,000	1,080	8,634	530,900
January	216,410	14,100	1,050	6,981	429,200
February	100,710	6,470	1,100	3,473	199,800
March	92,030	6,660	1,300	2,969	182,500
April	130,360	8,620	1,200	4,345	258,600
May	126,220	6,860	1,560	4,072	250,400
June	443,160	25,500	1,340	14,770	879,000
July	417,410	22,700	6,340	13,460	827,900
August	519,140	25,600	6,010	16,750	1,030,000
September	265,630	13,900	1,950	8,854	526,900
Water Year 1992	2,784,840	25,600	953	7,609	5,524,000

STREAMFLOW

07176000 Verdigris River near Claremore, Oklahoma

LOCATION.--Lat 36°18'26", long 95°41'52", in NE¹/₄NW¹/₄, sec.15, T.21 N., R.15 E., Rogers County, on left bank on downstream side of bridge on State Highway 20, 2.3 mi downstream from Caney River, 4.5 mi west of Claremore, 12.4 mi upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 mi².

AVERAGE DISCHARGE.--27 years (water years 1936-62), 3,723 ft³/s; 28 years (water years 1965-92), 4,301 ft³/s.

EXTREMES.--October 1935 to current year: Maximum discharge, 182,000 ft³/s May 21, 1943; no flow at times in 1936, 1939-40, 1956.

REMARKS.--Records fair. Flow regulated since May 1963 by Oologah Lake 14.3 mi upstream; some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	4,913	1,050	35	158	9,740
November	12,998	3,260	51	433	25,780
December	74,773	11,600	120	2,412	148,300
January	82,112	6,530	310	2,649	162,900
February	83,241	9,290	204	2,870	165,100
March	70,296	4,430	369	2,268	139,400
April	83,497	9,510	350	2,783	165,600
May	25,494	1,560	228	822	50,570
June	190,005	13,400	515	6,333	376,900
July	239,220	15,000	2,280	7,717	474,500
August	218,640	16,600	2,130	7,053	433,700
September	43,322	11,000	170	1,444	85,930
Water Year 1992	1,128,521	16,600	35	3,083	2,238,000

STREAMFLOW

07178200 Bird Creek at State Highway 266 near Catoosa, Oklahoma

LOCATION.--Lat 36°13'23", long 95°49'09", in SE_{1/4}SE_{1/4}, sec.9, T.20 N., R.14 E., Tulsa County,, near left on downstream abutment of bridge, 2.3 mi downstream from Elm Creek, 5 mi northwest of Catoosa High School, and at mile 9.5.

DRAINAGE AREA.--1,103 mi².

AVERAGE DISCHARGE.--4 years, 856 ft³/s.

EXTREMES.--August 1988 to current year: Maximum discharge, 18,500 ft³/s Mar. 14, 1990, gage height, 28.39 ft; minimum daily discharge, 81 ft³/s, Oct. 20, 1991

REMARKS.--Records good. Some regulation by Skiatook Lake (station 07177400). Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	12,834	3,220	81	414	25,460
November	19,470	7,460	142	649	38,620
December	51,067	13,100	176	1,647	101,300
January	13,908	1,950	211	449	27,590
February	25,961	5,200	152	895	51,490
March	7,921	757	128	256	15,710
April	22,299	2,640	223	743	44,230
May	16,317	2,680	231	526	32,360
June	100,663	9,070	513	3,355	199,700
July	20,114	3,500	249	649	39,900
August	10,533	1,310	162	340	20,890
September	6,640	568	168	221	13,170
Water Year 1992	307,727	13,100	81	841	610,400

STREAMFLOW

07191220 Spavinaw Creek near Sycamore, Oklahoma

LOCATION.--Lat 36°20'07", long 94°38'27", in NE1/4NW1/4, sec.4, T.21 N., R.25 E., Delaware County, on right bank 1.8 mi upstream from Cherokee Creek, 4.8 mi northeast of Row, 6.5 mi southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 mi²

AVERAGE DISCHARGE.--31 years, 109 ft³/s.

EXTREMES.--October 1961 to current year: Maximum discharge, 39,800 ft³/s July 27, 1975; minimum, 1.2 ft³/s Aug. 9, 1964.

REMARKS.--Records good. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	601	44	15	19.4	1,190
November	3,627	422	40	121	7,190
December	6,751	1,210	71	218	13,390
January	2,075	108	49	66.9	4,120
February	3,305	307	45	114	6,560
March	1,798	73	47	58.0	3,570
April	3,090	438	41	103	6,130
May	2,255	137	48	72.7	4,470
June	7,279	930	63	243	14,440
July	1,543	71	39	49.8	3,060
August	1,464	79	30	47.2	2,900
September	969	45	27	32.3	1,920
Water Year 1992	34,757	1,210	15	95.0	68,940

STREAMFLOW

07193000 Fort Gibson Lake near Fort Gibson, Oklahoma

LOCATION.--Lat 35°51'15", long 95°13'45", in sec.19, T.16 N., R.19 E., Cherokee County, at Fort Gibson Dam, 5 mi north of Fort Gibson, and at mile 7.7.

DRAINAGE AREA.--12,492 mi².

REMARKS.--Flow furnished by U.S. Army Corps of Engineers, Tulsa District.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	15,639	504	31,000
November	102,606	3,420	203,500
December	264,496	8,532	524,600
January	139,490	4,499	276,600
February	180,554	6,226	358,100
March	151,640	4,891	300,700
April	214,233	7,141	424,900
May	45,944	1,482	91,120
June	432,392	14,413	857,640
July	743,625	23,987	1,474,900
August	422,409	13,626	837,840
September	184,607	6,153	366,100
Water Year 1992	2,897,625	7,917	5,747,000

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OKLAHOMA

(National stream-quality accounting network station)

LOCATION. --Lat 35°51'10", long 95°13'44", in NW1/4NW1/4, sec.19, T.16 N., R.20 E., Cherokee County, Hydrologic Unit 11070209, on left bank 1.1 mi downstream from Fort Gibson Dam, 3.5 mi north of Fort Gibson, and at mile 6.6.

DRAINAGE AREA. --12,495 mi².

PERIOD OF RECORD. --Water years 1952 to current year.

PERIOD OF DAILY RECORD. --

SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to January 1982.

WATER TEMPERATURE: October 1951 to September 1963, October 1973 to January 1982.

REMARKS. --Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD WATER UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
NOV 1991	19...	1028	80020	12900	280	8.4	11.5	3.4	11.6	108	120
DEC 1991	16...	1028	80020	83	270	8.2	9.0	3.2	12.1	105	K18
FEB 1992	04...	1028	80020	E15	260	8.2	8.5	4.0	12.7	110	K7
APR 1992	08...	1028	80020	12500	298	8.7	14.0	2.3	11.1	110	K9
AUG 1992	05...	1028	80020	21400	246	7.8	27.0	5.7	7.2	92	K22

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION PERCENT RATIO (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY (MG/L AS CACO3) (90410)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)		
NOV 1991	19...	200	110	25	36	4.6	10	16	0.4	4.1	91	1
DEC 1991	16...	K15	110	22	35	4.3	9.7	16	.4	3.8	89	0
FEB 1992	04...	K3	110	38	36	4.4	7.5	13	.3	2.8	78	0
APR 1992	08...	K14	120	27	41	5.0	9.5	14	.4	2.7	98	3
AUG 1992	05...	42	110	29	35	4.8	6.7	12	.3	3.8	82	0

DATE	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED PER DAY (TONS) (70302)	SOLIDS, DIS-SOLVED PER AC-FT) (TONS) (70303)	
NOV 1991	19...	100	84	29	12	0.10	0.80	143	148	4980	0.19
DEC 1991	16...	101	82	31	13	.20	1.2	170	149	38.1	.23
FEB 1992	04...	85	70	29	11	.10	3.9	138	139	--	.19
APR 1992	08...	111	96	34	14	.20	.20	170	165	5740	.23
AUG 1992	05...	96	78	32	7.9	.10	6.6	141	147	8150	.19

ARKANSAS RIVER BASIN

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OKLAHOMA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
NOV 1991 19...	--	0.010	<0.010	0.150	0.150	0.020	0.020	0.38	0.55	0.140
DEC 16...	0.210	.010	.010	.210	.220	.010	< .010	.39	.61	.200
FEB 1992 04...	.440	.030	.030	--	.470	.010	.020	.39	--	--
APR 08...	--	< .010	< .010	.073	.079	.040	.030	.46	.57	--
AUG 05...	.540	.030	.020	.590	.560	.050	.030	.25	.89	.560

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 1991 19...	0.40	0.060	0.020	--	0.020	20	51	<3	9	<4
DEC 16...	.40	.050	< .010	.020	.020	<10	47	<3	6	<4
FEB 1992 04...	.40	.040	.020	.020	.010	30	44	<3	29	<4
APR 08...	.50	.030	< .010	.020	< .010	<10	46	<3	6	5
AUG 05...	.30	.080	.060	.070	.050	20	53	<3	22	<4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 1991 19...	4	<10	<1	<1	<1.0	130	<6	11	383	50
DEC 16...	<1	<10	1	<1	<1.0	120	<6	16	3.6	56
FEB 1992 04...	2	<10	<1	<1	<1.0	120	<6	16	--	67
APR 08...	<1	<10	2	<1	<1.0	140	<6	15	506	74
AUG 05...	7	<10	3	<1	<1.0	160	<6	40	2310	95

STREAMFLOW

07194500 Arkansas River near Muskogee, Oklahoma

LOCATION.--Lat 35°46'10", long 95°17'55", in NW_{1/4}, sec.21, T.15 N., R.19 E., Muskogee County, at bridge on U.S. Highway 62, 1.7 mi downstream from Neosho River, 3.5 mi northeast of Muskogee.

DRAINAGE AREA.--96,674 mi² of which 12,541 mi² probably is noncontributing.

REMARKS.--Gaging station discontinued Sept. 30, 1970, due to backwater conditions. Streamflow computed by combining flow at station 07165570 Arkansas River near Haskell, station 07176000 Verdigris River near Claremore, station 07178200 Bird Creek at State Highway 266 near Catoosa, station 07193000 Fort Gibson Lake Discharge near Fort Gibson, and estimating the flow for the ungaged intervening drainage area.

Monthly and yearly discharge

Month	Mean (ft ³ /s)	Runoff in acre-feet
October	3,896	239,600
November	9,504	565,500
December	22,825	1,403,000
January	15,014	923,200
February	14,333	824,400
March	10,633	653,800
April	15,734	936,200
May	7,413	455,800
June	42,132	2,507,000
July	46,443	2,856,000
August	38,099	2,343,000
September	16,886	1,005,000
Water Year 1992	20,267	14,710,000

STREAMFLOW

07195500 Illinois River near Watts, Oklahoma

LOCATION.--Lat 36°07'48", long 94°34'19", in NW¹/₄NE¹/₄, sec.18, T.19 N., R.26 E., Adair County, near right bank on downstream side of bridge on U.S. Highway 59, 1.5 mi north of Watts, 4.5 mi downstream from Cincinnati Creek, and at mile 106.2.

DRAINAGE AREA.--635 mi².

AVERAGE DISCHARGE.--37 years, 605 ft³/s.

EXTREMES.--August 1955 to current year: Maximum discharge, 68,000 ft³/s July 25, 1960; minimum, 8.6 ft³/s Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

REMARKS.--Records good. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Arkansas. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	13,944	2,910	103	450	27,660
November	44,526	4,890	333	1,484	88,320
December	48,036	7,030	629	1,550	95,280
January	17,048	917	362	550	33,810
February	16,190	1,440	297	558	32,110
March	10,018	420	262	323	19,870
April	11,674	1,260	208	389	23,160
May	14,361	1,230	185	463	28,490
June	36,040	7,780	349	1,201	71,490
July	15,980	2,520	205	515	31,700
August	20,203	3,170	201	652	40,070
September	8,339	730	159	278	16,540
Water Year 1992	256,359	7,780	103	700	508,500

**ARKANSAS RIVER BASIN
07195500 ILLINOIS RIVER NEAR WATTS, OKLAHOMA**

PERIOD OF RECORD--October 1989 to current year.

REMARKS--Samples were collected bi-monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidityunits; MG/L = milligrams per liter; MM = millimeters; UMF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	HARD-NESS TOTAL (MG/L CaCO3) (00900)	
NOV 1991	19...	1015	1028	80020	2360	213	7.6	15.0	19	740	10.8	111	88
FEB 1992	06...	1115	1028	80020	316	282	8.3	8.0	--	740	12.3	107	--
MAR 1992	31...	1220	1028	80020	260	274	8.2	11.5	9.3	740	12.6	119	110
MAY 1992	27...	1040	1028	80020	393	257	8.3	17.0	8.0	740	8.8	94	110
AUG 1992	17...	1519	1028	80020	355	301	8.0	22.5	--	740	7.8	93	--
SEP 1992	10...	1145	1028	80020	299	307	7.9	22.0	23	740	8.0	94	120

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS-IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-IT FIELD (MG/L AS CO3) (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
NOV 1991	32	2.0	4.9	10	0.2	3.9	108	0	9.1	8.0	0.10
FEB 1992	--	--	--	--	--	--	129	0	--	--	--
MAR 1992	43	1.8	9.4	15	.4	2.7	129	0	14	13	< .10
MAY 1992	42	2.0	7.5	12	.3	3.0	133	0	10	10	.10
AUG 1992	--	--	--	--	--	--	140	0	--	--	--
SEP 1992	45	1.8	11	16	.4	4.0	137	0	11	15	< .10

DATE	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
NOV 1991	9.1	163	142	0.22	1040	4.20	0.040	0.46	0.50	4.7	0.190
FEB 1992	--	--	--	--	--	2.70	< .010	.28	.30	2.9	.090
MAR 1992	3.6	156	161	.21	110	2.20	.050	.35	.40	2.7	.130
MAY 1992	7.8	152	156	.21	161	1.70	.050	.14	.20	1.9	.150
AUG 1992	--	--	--	--	--	2.00	.040	--	< .20	--	.180
SEP 1992	8.3	212	172	.29	171	1.80	.040	.45	.50	2.3	.200

ARKANSAS RIVER BASIN

07195500 ILLINOIS RIVER NEAR WATTS, OKLAHOMA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
NOV 1991 19...	--	0.130	<1	47	<0.5	6.0	<5	<3	<10	380	<10
FEB 1992 06...	0.080	.070	--	--	--	--	--	--	--	--	--
MAR 31...	.140	.120	<1	40	< .5	1.0	<5	<3	<10	13	<10
MAY 27...	.150	.110	2	47	< .5	<1.0	<5	<3	<10	7	<10
AUG 17...	.160	.140	--	--	--	--	--	--	--	--	--
SEP 10...	.210	.190	2	52	< .5	<1.0	<5	<3	<10	13	<10

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 1991 19...	<4	59	<10	<10	<1.0	43	<6	17	60	382	56
FEB 1992 06...	--	--	--	--	--	--	--	--	--	--	--
MAR 31...	<4	69	<10	<10	<1.0	48	<6	6	--	--	--
MAY 27...	<4	60	<10	<10	<1.0	49	<6	5	--	--	--
AUG 17...	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<4	59	<10	<10	2.0	51	<6	<3	--	--	--

STREAMFLOW

07195855 Flint Creek near West Siloam Springs, Oklahoma

LOCATION.--Lat 36°12'58", long 94°36'15", in NE1/4NE1/4, sec.14, T.20 N., R.25 E., Delaware County, on left bank 180 ft downstream from county bridge, 2.5 mi from Arkansas-Oklahoma State line, northwest of Siloam Springs, Oklahoma.

DRAINAGE AREA.--59.8 mi².

AVERAGE DISCHARGE.--13 years, 45.8 ft³/s.

EXTREMES.--June 1979 to current year: Maximum discharge, 5,590 ft³/s Dec. 21, 1984; minimum daily, 0.40 ft³/s Aug. 7, 1980.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	484	54	7.0	15.6	960
November	3,164	517	14	105	6,280
December	3,807	503	44	123	7,550
January	1,502	82	34	48.5	2,980
February	1,628	118	29	56.1	3,230
March	865	41	18	27.9	1,720
April	1,084	117	17	36.1	2,150
May	799	36	21	25.8	1,580
June	2,455	402	30	81.8	4,870
July	793	49	15	25.6	1,570
August	723	53	16	23.3	1,430
September	532	29	12	17.7	1,060
Water Year 1992	17,836	517	7.0	48.7	35,380

ARKANSAS RIVER BASIN

07196000 FLINT CREEK NEAR KANSAS, OKLAHOMA

LOCATION.--Lat 36°11'11", long 94°42'24", in SW1/4NW1/4, sec. 25, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at U.S. Highway 412 bridge, 6.0 mi southeast of Kansas, and at mi 2.2.

DRAINAGE AREA.--110 mi².

PERIOD OF RECORD.--Water years 1955-61, 1963, 1975-80, July 1991 to current year.

REMARKS.--Samples were collected bi-monthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM- MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	
NOV 1991	19...	1240	1028	80020	--	222	7.8	15.0	740	9.6	98	59
FEB 1992	06...	1530	1028	80020	57	262	8.7	10.0	750	12.8	115	101
MAR	30...	1735	1028	80020	41	263	8.1	12.0	740	11.1	106	107
MAY	27...	1455	1028	80020	61	254	8.1	18.0	740	8.3	90	114
JUL	27...	1527	1028	80020	53	--	7.8	27.5	735	9.6	--	117
SEP	09...	1555	1028	80020	33	296	7.9	25.5	730	7.2	92	124

DATE	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 1991	0	3.80	0.020	0.28	0.30	4.2	0.170	--	0.140	6	17
FEB 1992	3	2.80	< .010	--	< .20	--	.110	0.090	.090	--	--
MAR	0	2.60	< .010	--	< .20	--	.060	.090	.090	--	--
MAY	0	1.60	.020	--	< .20	--	.170	--	.160	--	--
JUL	0	1.60	.010	--	< .20	--	.120	.110	.100	--	--
SEP	0	1.60	.010	--	< .20	--	.120	--	.120	--	--

ARKANSAS RIVER BASIN

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OKLAHOMA

LOCATION.--Lat 35°55'22", long 94°55'24", in SE1/4NE1/4, sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of channel on downstream side of pier of bridge, 0.2 mi downstream from U.S. Highway 62, 2.2 mi northeast of Tahlequah, 6.5 mi upstream from Baron Fork, and at mile 55.8.

DRAINAGE AREA --959 mi².

PERIOD OF RECORD.--Water years 1960-61, 1975-79, 1989 to current year.

REMARKS.--Samples were collected on a bimonthly schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UMF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	DISCHARGE, CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD TEMPERATURE (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00300)	OXYGEN, DIS-SOLVED (MG/L) (00301)		
NOV 1991	20...	1028	80020	3850	198	7.8	13.5	21	750	9.8	96	
DEC 10...	1600	1028	80020	1380	225	7.9	12.0	--	750	11.1	105	
FEB 1992	05...	1600	1028	80020	482	246	8.6	9.0	--	750	13.0	114
APR 09...	1900	1028	80020	354	250	8.7	20.0	2.5	745	12.8	144	
JUN 08...	1630	1028	80020	7200	180	7.7	20.0	45	745	8.0	90	
JUL 29...	1330	1028	80020	1290	208	7.7	26.5	27	745	7.0	89	

DATE	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE WATER FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER FIELD (MG/L AS CO3) (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)
NOV 1991	82	30	1.8	4.6	10	0.2	3.2	77	0	9.6	7.4
DEC 10...	--	--	--	--	--	--	--	95	0	--	--
FEB 1992	--	--	--	--	--	--	--	106	2	--	--
APR 09...	110	40	1.9	8.2	14	.3	2.6	108	2	14	13
JUN 08...	80	29	1.8	4.0	9	.2	3.2	73	0	7.7	2.8
JUL 29...	89	33	1.6	5.8	12	.3	3.8	99	0	8.1	8.8

DATE	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)
NOV 1991	<0.10	8.4	107	118	0.15	1110	3.20	0.040	0.27	0.30	3.6
DEC 10...	--	--	--	--	--	--	2.60	.020	--	< .20	--
FEB 1992	--	--	--	--	--	--	2.10	< .010	--	< .20	--
APR 09...	.10	3.3	148	145	.20	141	1.40	.020	--	< .20	--
JUN 08...	< .10	8.9	120	100	.16	2330	1.40	.020	.36	.40	1.8
JUL 29...	< .10	9.1	134	122	.18	467	.710	.030	--	< .20	--

ARKANSAS RIVER BASIN

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OKLAHOMA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
NOV 1991										
20...	0.100	0.090	0.090	<1	37	<0.5	1.0	<5	<3	<10
DEC										
10...	.030	.030	.020	--	--	--	--	--	--	--
FEB 1992										
05...	< .010	.040	.030	--	--	--	--	--	--	--
APR										
09...	.060	.050	.050	1	40	< .5	<1.0	<5	<3	<10
JUN										
08...	.120	.160	.120	<1	52	< .5	<1.0	<5	<3	<10
JUL										
29...	.010	.040	.020	<1	42	< .5	<1.0	<5	<3	<10
DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 1991										
20...	31	<10	<4	5	<10	<10	1.0	38	<6	14
DEC										
10...	--	--	--	--	--	--	--	--	--	--
FEB 1992										
05...	--	--	--	--	--	--	--	--	--	--
APR										
09...	4	<10	<4	7	<10	<10	<1.0	48	<6	4
JUN										
08...	86	<10	<4	6	<10	<10	<1.0	39	<6	9
JUL										
29...	11	<10	<4	4	<10	<10	<1.0	42	<6	5

STREAMFLOW

07196900 Baron Fork at Dutch Mills, Arkansas

LOCATION.--Lat 35°52'48", long 94°29'11", on line between secs.21 and 22, T.14 N., R.33 W., Washington County, near right bank on downstream side of bridge on State Highway 59 at Dutch Mills, 2.2 mi downstream from Fly Creek, and 2.9 mi upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--40.6 mi².

AVERAGE DISCHARGE.--34 years, 42.6 ft³/s.

EXTREMES.--April 1958 to current year: Maximum discharge, 20,900 ft³/s, Nov. 18, 1985; no flow at times.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	1,300	372	1.1	41.9	2,580
November	1,439	286	17	48.0	2,850
December	2,912	424	33	93.9	5,780
January	907	57	17	29.3	1,800
February	592	47	12	20.4	1,170
March	521	32	12	16.8	1,030
April	537	108	8.2	17.9	1,070
May	1,343	231	4.9	43.3	2,660
June	2,123	486	13	70.8	4,210
July	479	89	5.1	15.5	951
August	1,922	1,170	4.8	62	3,810
September	532	139	4.2	17.7	1,060
Water Year 1992	14,607	1,170	1.1	39.9	28,970

ARKANSAS RIVER BASIN

07197000 BARON FORK AT ELDON, OKLAHOMA

LOCATION.--Lat 35°55'16", long 94°50'18", in NE1/4SE1/4, sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream left abutment of bridge on State Highway 51, 0.4 mi southeast of Eldon, 6.0 mi downstream from Tyner Creek, and at mile 8.8.

DRAINAGE AREA.--307 mi².

PERIOD OF RECORD.--1948, 1958-60, 1991 to current year.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data;K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	
NOV 1991											
20...	1630	1028	80020	--	157	7.8	14.0	750	11.0	108	
DEC											
10...	1315	1028	80020	453	182	7.8	12.0	750	10.8	102	
FEB 1992											
05...	1115	1028	80020	155	188	8.2	9.0	750	12.3	108	
APR											
09...	1301	1028	1028	129	191	8.3	16.5	745	12.1	126	
09...	1302	1028	1028	129	191	8.3	16.5	745	12.1	126	
09...	1303	1028	1028	129	191	8.3	16.5	745	12.2	127	
09...	1304	1028	1028	129	192	8.3	16.5	745	12.2	127	
09...	1305	1028	1028	129	192	8.3	16.5	745	12.2	127	
09...	1306	1028	1028	129	192	8.3	16.5	745	12.2	127	
09...	1307	1028	1028	129	192	8.3	16.5	745	12.3	128	
09...	1308	1028	1028	129	191	8.3	16.5	745	12.3	128	
09...	1309	1028	1028	129	191	8.3	16.5	745	12.3	128	
09...	1310	1028	1028	129	192	8.3	16.5	745	12.3	128	
09...	1311	1028	1028	129	191	8.3	16.5	745	12.3	128	
09...	1312	1028	1028	129	191	8.3	16.5	745	12.3	128	
09...	1313	1028	1028	129	191	8.3	16.5	745	12.3	128	
09...	1314	1028	1028	129	191	8.4	16.5	745	12.3	129	
09...	1315	1028	1028	129	191	8.4	16.5	745	12.3	129	
09...	1330	1028	80020	129	191	8.3	16.0	745	12.3	128	
JUN											
04...	1500	1028	80020	--	218	7.9	19.0	740	10.2	113	
JUL											
28...	1430	1028	80020	136	198	7.9	25.0	750	10.1	124	
		BICAR-BONATE WATER FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER FIELD (MG/L AS CO3) (00452)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO-TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO-DIS-SOLVED (MG/L AS P) (00671)
NOV 1991											
20...	61	0	2.40	0.010	0.17	0.20	2.6	0.060	0.050	0.050	
DEC											
10...	76	0	3.40	.010	--	< .20	--	.090	.090	.080	
FEB 1992											
05...	85	0	1.60	.020	--	< .20	--	< .010	.020	.010	
APR											
09...	89	1	.810	.020	--	< .20	--	< .010	< .010	< .010	
JUN											
04...	94	0	.970	.020	--	< .20	--	.050	.040	.040	
JUL											
28...	109	0	1.30	.040	.35	.40	1.7	.200	.190	.180	

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OKLAHOMA

LOCATION.--Lat 35°34'23", long 95°04'07", in NE1/4SW1/4, sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110104, on right bank 4.2 mi downstream from Tenkiller Ferry Dam, 4.5 mi northeast of Gore, and at mile 8.5.

DRAINAGE AREA.--1,626 mi².

PERIOD OF RECORD.--Water years 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.

WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UMF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	
OCT 1991												
09...	0815	1028	80020	12	350	7.8	15.5	1.2	757	5.4	54	--
DEC 17...	0800	1028	80020	3930	189	7.8	10.5	--	759	9.1	82	--
MAR 1992												
04...	0815	1028	80020	1670	205	8.0	9.5	1.5	747	10.2	91	83
APR 08...	1445	1028	80020	1910	191	8.3	11.5	--	750	9.9	92	--
JUN 03...	1145	1028	80020	4080	195	7.5	13.0	.70	744	6.6	64	89
JUL 16...	0652	1028	1028	77	259	6.9	17.0	--	745	3.4	36	--
16...	0655	1028	1028	77	258	7.1	17.0	--	745	3.8	40	--
16...	0657	1028	1028	77	258	7.2	17.0	--	745	3.9	41	--
16...	0700	1028	1028	77	259	7.2	17.0	--	745	4.0	42	--
16...	0702	1028	1028	77	260	7.2	17.0	--	745	4.0	42	--
16...	0705	1028	1028	77	260	7.2	17.0	--	745	4.0	42	--
16...	0707	1028	1028	77	260	7.2	17.0	--	745	4.0	42	--
16...	0710	1028	1028	77	260	7.2	17.0	--	745	3.8	40	--
16...	0712	1028	1028	77	260	7.3	17.0	--	745	3.8	40	--
16...	0714	1028	1028	77	256	7.3	17.5	--	745	3.8	41	--
AUG 19...	1330	1028	80020	151	242	7.8	20.0	2.0	755	9.9	110	100

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 1991												
09...	--	--	--	--	--	--	115	0	7.5	51	0.10	206
DEC 17...	--	--	--	--	--	--	91	0	--	--	--	--
MAR 1992												
04...	30	1.9	7.3	16	0.3	2.4	87	0	7.2	12	< .10	119
APR 08...	--	--	--	--	--	--	81	4	--	--	--	--
JUN 03...	33	1.7	4.3	9	.2	2.2	91	0	8.1	6.5	< .10	116
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	38	2.0	8.3	15	.4	2.4	110	0	7.0	12	< .10	133

ARKANSAS RIVER BASIN

07198000 ILLINOIS RIVER NEAR GORE, OKLAHOMA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 1991											
09...	--	--	--	0.620	0.190	0.40	0.60	1.2	0.050	0.030	0.020
DEC											
17...	--	--	--	1.00	.050	.36	.40	1.4	.020	.030	.030
MAR 1992											
04...	109	0.16	537	1.20	< .010	.27	.30	1.5	.020	<.010	<.010
APR											
08...	--	--	--	1.30	.020	--	< .20	--	.030	<.010	<.010
JUN											
03...	106	.16	1280	1.30	.020	.18	.20	1.5	.050	.010	<.010
JUL											
16...	--	--	--	--	--	--	--	--	--	--	--
AUG											
19...	126	.18	54.2	.260	.390	.32	.70	.96	.050	.030	.020

STREAMFLOW

07245000 Canadian River near Whitefield, Oklahoma

LOCATION.--Lat 35°15'50", long 95°14'21", in SE1/4SE1/4, sec.12, T.9 N., R.19 E., Haskell County, on left downstream bank at end of bridge, on State Highway 2, 0.8 mi north of Whitefield, 5.5 mi upstream from Taleka (Snake) Creek, 8.2 mi downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 mi², of which 9,700 mi² is probably noncontributing.

AVERAGE DISCHARGE.--25 years (water years 1939-63), 6,005 ft³/s; 25 years (water years 1968-92), 6,477 ft³/s.

EXTREMES.--July 1938 to current year: Maximum discharge, 281,000 ft³/s May 10, 1943; minimum daily, 0.4 ft³/s Oct. 8, 1956.

REMARKS.--Records fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and except for 54 mi² of intervening area, completely regulated thereafter by Eufaula Lake. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	109,016	22,900	80	3,517	216,200
November	504,280	23,400	4,260	16,810	1,000,000
December	629,340	43,200	3,270	20,300	1,248,000
January	479,220	36,700	3,620	15,460	950,500
February	146,747	10,600	315	5,060	291,100
March	162,777	13,500	470	5,251	322,900
April	211,306	13,700	23	7,044	419,100
May	544,400	29,300	2,100	17,560	1,080,000
June	804,020	39,000	9,320	26,800	1,595,000
July	294,930	26,100	2,650	9,514	585,000
August	621,510	40,400	8,810	20,050	1,233,000
September	417,240	22,300	8,340	13,910	827,600
Water Year 1992	4,924,786	43,200	23	13,460	9,768,000

STREAMFLOW

07247000 Poteau River at Cauthron, Arkansas

LOCATION.--Lat 34°55'08", long 94°17'55", in NW¹/₄SW¹/₄, sec.16, T.3 N., R.31 W., Scott County, on right bank at downstream side of highway bridge at Cauthron, 2.9 mi downstream from Cross Creek, 7.8 mi downstream from Jones Creek, and at mile 109.0.

DRAINAGE AREA.--203 mi².

AVERAGE DISCHARGE.--53 years, 224 ft³/s.

EXTREMES.--February 1939 to current year: Maximum discharge, 32,200 ft³/s May 20, 1960; no flow at times in most years.

REMARKS.--Records good. As of September 1974, flow from 92.2 mi² above this station is controlled by 16 floodwater-detention reservoirs with a total combined capacity of 39,082 acre-ft below the flood spillway crests, of which 33,524 acre-ft is flood-detention capacity, 2,100 acre-ft is water-supply storage, and 3,458 acre-ft is sediment-storage capacity.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	8,905	4,550	0.64	287	17,660
November	16,849	2,190	80	562	33,420
December	28,409	3,460	208	916	56,350
January	8,504	1,200	118	274	16,870
February	3,888	586	37	134	7,710
March	4,317	648	50	139	8,560
April	1,426	187	9.6	47.5	2,830
May	1,429	336	6.3	46.1	2,830
June	13,833	2,300	23	461	27,440
July	888	444	.92	28.6	1,760
August	54	6.2	.71	1.75	108
September	3,730	1,150	3.3	124	7,400
Water Year 1992	92,232	4,550	0.64	252	182,900

ARKANSAS RIVER BASIN

07247000 POTEAU RIVER AT CAUTHRON, ARKANSAS

PERIOD OF RECORD.--Water years 1945-61, 1975-79, December 1991-July 1992 (discontinued).

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	PH WATER FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRES-SURE (MM HG) (00025)	OXYGEN, OF DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	BICAR-BONATE WATER FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER FIELD DIS IT CO3 (00452)
DEC 1991												
11...	0815	1028	80020	785	48	6.8	11.0	--	10.2	--	9	0
11...	0815	--	80020	785	--	--	--	--	--	--	--	--
JAN 1992												
22...	0830	1028	80020	250	57	7.2	4.5	745	12.5	99	13	0
MAR												
10...	1555	1028	80020	158	88	7.1	14.5	760	10.8	106	19	0
APR												
13...	1440	1028	80020	29	93	7.2	21.5	750	11.4	131	26	0
MAY												
27...	0800	1028	80020	12	108	6.7	19.0	748	5.4	59	22	0
JUN												
24...	1245	1028	80020	136	60	6.8	25.0	742	6.5	81	21	0
JUL												
20...	1235	1028	1028	3.0	106	7.1	27.5	750	8.0	103	--	--
20...	1240	1028	1028	3.0	106	7.1	27.5	750	8.1	105	--	--
20...	1242	1028	1028	3.0	107	7.1	27.5	750	8.0	103	--	--
20...	1245	1028	1028	3.0	106	7.1	27.5	750	8.1	105	--	--
20...	1247	1028	1028	3.0	106	7.1	28.0	750	8.0	104	--	--
20...	1250	1028	1028	3.0	106	7.1	28.0	750	8.0	104	--	--

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (70507)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 1991											
11...	0.290	0.020	0.36	0.40	--	0.050	0.050	0.040	14	30	--
JAN 1992											
22...	.190	.020	.28	.30	0.49	.100	.080	.060	6	4.1	--
MAR											
10...	.620	.040	.37	.40	1.0	.100	.110	.100	20	8.5	98
APR											
13...	.650	.010	.28	.30	.96	.160	.150	.120	18	1.4	86
MAY											
27...	.460	.080	.42	.50	.97	.260	.220	.190	25	.81	--
JUN											
24...	.180	.040	.35	.40	.56	.090	.100	.070	30	11	--
JUL											
20...	--	--	--	--	--	--	--	--	--	--	--

ARKANSAS RIVER BASIN

07247015 POTEAU RIVER AT LOVING, OKLAHOMA

LOCATION.--Lat 34°52'47", long 94°29'02", in SW1/4NW1/4, sec.29, T.5 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, on right downstream bank of county road bridge, 0.6 mi northwest of Loving, 1.0 mi above Loving Creek, and at mile 93.6.

DRAINAGE AREA.--269 mi².

PERIOD OF RECORD.--Water years 1945-61, 1975-79, December 1991-July 1992 (discontinued).

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data;K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UMF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARDS WATER) (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED OF (MG/L) (00300)	OXYGEN, BICAR-DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	BONATE WATER FIELD AS MG/L AS HCO3 (00453)	CAR-BONATE WATER FIELD AS MG/L AS CO3 (00452)	
DEC 1991												
11...	1015	--	80020	838	--	--	--	--	--	--	--	
11...	1015	1028	80020	838	48	6.9	11.5	754	9.4	88	12	0
JAN 1992												
22...	1045	1028	80020	285	59	7.1	5.5	746	12.6	102	19	0
MAR												
11...	0745	1028	80020	206	86	7.3	9.0	760	10.0	87	20	0
APR												
14...	0735	1028	80020	36	93	7.0	19.5	750	7.4	82	21	0
MAY												
27...	1000	1028	80020	50	115	7.0	18.5	750	6.0	65	27	0
JUN												
24...	1445	1028	80020	260	65	6.8	28.0	742	6.5	86	17	0
JUL												
20...	1340	1028	80020	26	81	7.0	29.5	752	6.6	88	--	--
20...	1415	1028	1028	26	80	6.9	29.5	752	6.0	80	--	--
20...	1418	1028	1028	26	80	7.0	29.5	752	6.0	80	--	--
20...	1422	1028	1028	26	80	7.0	29.5	752	6.2	83	--	--
20...	1425	1028	1028	26	81	7.0	29.5	752	6.2	83	--	--
20...	1428	1028	1028	26	81	7.0	29.5	752	6.2	83	--	--
20...	1430	1028	1028	26	81	7.0	29.5	752	6.4	85	--	--
20...	1433	1028	1028	26	81	7.0	29.5	752	6.4	85	--	--
20...	1437	1028	1028	26	81	7.0	29.5	752	6.4	85	--	--
20...	1440	1028	1028	26	81	7.0	29.5	752	6.6	88	--	--
20...	1443	1028	1028	26	81	7.0	29.5	752	6.6	88	--	--
20...	1446	1028	1028	26	81	7.0	29.5	752	6.6	88	--	--
20...	1450	1028	1028	26	81	7.0	29.5	752	6.6	88	--	--
20...	1453	1028	1028	26	81	7.0	29.5	752	6.4	85	--	--
AUG												
25...	0755	1028	80020	2.9	114	7.0	24.5	754	4.8	58	29	0

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (70507)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, CHARGE, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 1991											
11...	0.250	0.030	0.38	0.40	0.64	0.050	0.040	0.040	21	48	--
JAN 1992											
22...	.160	.020	--	.30	.46	.050	.040	0.020	6	4.6	--
MAR											
11...	.280	.030	.46	.50	--	.070	.060	0.030	12	6.7	94
APR											
14...	.560	.040	.36	.40	.98	.080	.050	0.030	17	1.7	85
MAY											
27...	.990	.050	.24	.30	1.3	.080	.080	0.050	29	3.9	--
JUN											
24...	.140	.040	.27	.30	.44	.090	.040	0.040	31	22	--
JUL											
20...	.065	.040	.46	.50	--	.070	.040	0.030	14	.98	--
AUG											
25...	.086	.050	.54	.60	.68	.020	.050	0.030	8	.06	--

ARKANSAS RIVER BASIN

07247025 POTEAU RIVER AT HONTUBBY, OKLAHOMA

LOCATION.--Lat 34°51'29", long 94°33'56", in SW1/4SE1/4, sec. 33, T.5 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge, .6 mi north of Hontubby.

DRAINAGE AREA.--301 mi².

PERIOD OF RECORD.--May 1992 (discontinued).

REMARKS.--Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER FIELD (STANDARD) (00400)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESURE (MM HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	BICARBONATE WATER DISIT FIELD (MG/L AS HCO3) (00453)	
MAY 1992 27...	1315	1028	80020	60	101	6.8	19.5	750	5.7	63	27
DATE	MG/L AS CO3 (00452)	NITROGEN, NO2+NO3 DISIT FIELD (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00671)	SEDIMENT, DISCHARGE, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
MAY 1992 27...	0	0.620	0.060	0.34	0.40	1.0	0.080	0.040	0.020	29	4.7

ARKANSAS RIVER BASIN

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OKLAHOMA

LOCATION.--Lat 34°52'46", long 94°30'40", in NE1/4SW1/4, sec.31, T.4 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, on downstream side of bridge pier of county road bridge, 2.2 mi above Haw Creek, 5.0 mi north of Page, and at mile 24.6.

DRAINAGE AREA.--74.4 mi².

PERIOD OF RECORD.--December 1991 to September 1992.

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY	AGENCY	DIS-	SPE-	PH	BARO-	OXYGEN,		BICAR-	CAR-	
		COL-LECTING SAMPLE (CODE NUMBER) (00027)	ANA-LYZING SAMPLE (CODE NUMBER) (00028)	CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND-ARD WATER UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	BONATE WATER FIELD MG/L AS HCO3 (00453)	BONATE WATER FIELD MG/L AS CO3 (00452)
DEC 1991												
16...	1430	1028	80020	282	103	7.0	10.0	755	11.0	98	10	0
JAN 1992												
22...	1415	1028	80020	160	27	6.9	7.5	739	11.4	98	--	--
MAR												
11...	1445	1028	80020	153	28	7.0	10.0	760	11.6	103	3	0
APR												
14...	1015	1028	80020	50	35	6.8	19.5	750	7.8	87	10	0
MAY												
28...	0815	1028	80020	53	21	6.5	15.0	744	7.8	79	9	0
JUN												
25...	0850	1028	80020	53	30	6.7	24.5	740	6.4	79	9	0
JUL												
22...	0820	1028	80020	7.4	42	6.3	26.0	747	6.2	78	16	0
22...	0845	1028	1028	7.4	42	6.3	26.0	747	6.4	81	--	--
22...	0850	1028	1028	7.4	42	6.3	26.0	747	6.2	78	--	--
22...	0854	1028	1028	7.4	42	6.3	26.0	747	6.2	78	--	--
22...	0858	1028	1028	7.4	42	6.3	26.0	747	6.2	78	--	--
22...	0902	1028	1028	7.4	42	6.3	26.0	747	6.2	78	--	--
22...	0906	1028	1028	7.4	42	6.3	26.0	747	6.4	81	--	--
22...	0910	1028	1028	7.4	42	6.3	26.0	747	6.0	76	--	--
22...	0912	1028	1028	7.4	42	6.3	26.0	747	6.0	76	--	--
22...	0916	1028	1028	7.4	42	6.3	26.0	747	6.1	77	--	--
22...	0920	1028	1028	7.4	42	6.3	26.0	747	6.0	76	--	--
AUG												
25...	0945	1028	80020	2.6	40	--	25.5	751	4.8	59	--	--

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
	DEC 1991										
16...	0.140	0.020	--	<0.20	--	0.020	0.010	0.020	<1	--	--
JAN 1992											
22...	.100	.010	--	< .20	--	.020	.010	< .010	<1	--	--
MAR											
11...	<.050	.030	--	< .20	--	< .010	< .010	< .010	2	0.83	87
APR											
14...	.075	.040	0.35	.40	0.47	.020	.030	< .010	24	3.2	63
MAY											
28...	.070	.030	--	< .20	--	.030	< .010	< .010	4	.58	--
JUN											
25...	<.050	.040	.17	.20	--	.020	< .010	.010	5	.72	--
JUL											
22...	<.050	.040	.24	.30	--	.260	< .010	< .010	3	.06	--
AUG											
25...	<.050	.060	--	.40	--	< .010	.020	< .010	5	.03	--

ARKANSAS RIVER BASIN

07247345 BLACK FORK AT HODGEN, OKLAHOMA

LOCATION.--Lat 34°50'35", long 94°37'28", in SE1/4 SE1/4, sec. 01, T.4 N., R.25E., LeFlore County, Hydrologic Unit 11110105, at county road bridge .4 mi east of Hodgen, Oklahoma.

DRAINAGE AREA--179 mi².

PERIOD OF RECORD.--December 1991 to September 1992.

REMARKS.--Samples were collected periodically, and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	BICAR-BONATE DIS- SOLVED WATER (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)		
DEC 1991												
17...	0945	1028	80020	373	32	7.0	9.0	760	11.2	98	12	0
17...	0945	--	80020	373	--	--	--	--	--	--	--	--
MAR 1992												
11...	1210	1028	80020	199	37	6.9	12.0	760	9.8	91	10	0
MAY												
27...	1510	1028	80020	88	37	6.7	19.0	749	6.5	71	12	0
JUN												
25...	1045	1028	80020	100	41	7.0	26.0	745	7.4	93	12	0
JUL												
21...	1435	1028	80020	18	36	7.0	28.5	752	5.6	74	20	0
21...	1515	1028	1028	18	47	7.0	29.0	752	5.4	71	--	--
21...	1520	1028	1028	18	36	7.0	29.0	752	5.6	74	--	--
21...	1525	1028	1028	18	36	7.0	29.0	752	5.6	74	--	--
21...	1530	1028	1028	18	36	7.0	29.0	752	5.7	75	--	--
21...	1535	1028	1028	18	39	7.0	29.0	752	5.6	74	--	--
21...	1540	1028	1028	18	36	7.0	29.0	752	5.7	75	--	--
21...	1545	1028	1028	18	36	7.0	29.0	752	5.7	75	--	--
AUG												
24...	1415	1028	80020	7.2	42	6.3	28.5	--	6.6	--	22	0

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 1991											
17...	0.087	0.010	--	<0.20	--	0.100	<0.010	<0.010	3	3.0	--
MAR 1992											
11...	< .050	.040	0.17	.20	--	.020	< .010	< .010	4	2.1	82
MAY											
27...	.086	.050	.36	.40	0.49	.070	< .010	< .010	10	2.4	--
JUN											
25...	.068	.040	.37	.40	.47	.100	.010	< .010	8	2.2	--
JUL											
21...	< .050	.080	.43	.50	--	.030	.010	.010	6	.29	--
AUG											
24...	< .050	.060	--	.30	--	< .010	.020	< .010	11	.21	--

ARKANSAS RIVER BASIN

07247650 FOURCHE MALINE NEAR LEFLORE, OKLAHOMA

LOCATION--Lat 34°55'11", long 94°56'43", in NE1/4SE1/4, sec.11, T.5 N., R.22 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.6 mi east of LeFlore, Oklahoma.

DRAINAGE AREA--270 mi².

PERIOD OF RECORD--December 1991 to September 1992.

REMARKS--Samples were collected periodically, and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD WATER UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	BICAR-BONATE WATER FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER FIELD MG/L AS CO3 (00452)
DEC 1991												
10...	1400	1028	80020	287	75	6.7	14.0	754	9.0	88	18	0
10...	1400	--	80020	287	--	--	--	--	--	--	--	--
MAR 1992												
12...	0850	1028	80020	331	74	7.1	11.5	760	10.0	92	16	0
MAY												
26...	1430	1028	80020	465	68	6.9	20.5	751	7.2	81	26	0
JUN												
01...	2335	1028	80020	3540	60	6.9	18.5	751	7.9	86	21	0
02...	0105	1028	80020	4990	48	7.1	19.0	747	8.0	88	16	0
02...	0400	1028	80020	5020	46	7.1	18.5	747	7.9	86	17	0
02...	1045	1028	80020	3840	50	6.8	18.5	746	7.8	85	18	0
03...	0805	1028	80020	5620	47	6.9	18.0	744	7.1	77	13	0
03...	1530	1028	80020	4660	51	6.8	20.5	741	7.2	82	17	0
26...	0900	1028	80020	282	80	7.1	25.0	748	5.8	72	27	0
JUL												
21...	1045	1028	80020	61	100	6.7	26.5	752	5.2	65	30	0
21...	1130	1028	1028	61	100	6.7	26.5	752	5.4	68	--	--
21...	1133	1028	1028	61	100	6.7	26.5	752	5.2	66	--	--
21...	1137	1028	1028	61	100	6.7	26.5	752	5.6	71	--	--
21...	1140	1028	1028	61	100	6.7	26.5	752	5.5	70	--	--
21...	1144	1028	1028	61	100	6.7	27.0	752	5.6	71	--	--
21...	1147	1028	1028	61	100	6.7	26.5	752	5.6	71	--	--
21...	1152	1028	1028	61	100	6.7	26.5	752	5.4	68	--	--
21...	1155	1028	1028	61	100	6.7	26.5	752	5.6	71	--	--
21...	1159	1028	1028	61	100	6.7	26.5	752	5.6	71	--	--
21...	1203	1028	1028	61	100	6.7	27.0	752	5.0	63	--	--
21...	1207	1028	1028	61	100	6.7	26.5	752	5.6	71	--	--
21...	1210	1028	1028	61	100	6.7	27.0	752	5.4	69	--	--
21...	1214	1028	1028	61	100	6.7	26.5	752	5.2	66	--	--
21...	1218	1028	1028	61	100	6.7	26.5	752	5.4	68	--	--
AUG												
25...	1145	1028	80020	7.3	100	7.1	27.5	752	4.6	59	--	--

ARKANSAS RIVER BASIN

07247650 FOURCHE MALINE NEAR LEFLORE, OKLAHOMA--CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, PENDEDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 1991											
10...	0.130	0.020	0.37	0.40	0.52	0.020	0.020	0.020	17	13	--
MAR 1992											
12...	.056	.040	.45	.50	.56	.100	.100	.050	49	44	98
MAY											
26...	.110	.070	.32	.40	.52	.070	.040	.010	78	98	--
JUN											
01...	.093	.040	.56	.60	.71	.070	.040	.040	262	2500	--
02...	.075	.040	.56	.60	.69	.110	.070	.060	333	4490	--
02...	.050	.040	.56	.60	.66	.060	.030	.030	182	2470	--
02...	.055	.060	.52	.60	.66	.060	.090	.020	94	975	--
03...	<.050	.020	.47	.50	.57	.100	.030	.020	66	1000	--
03...	.050	.060	.53	.60	.66	.060	.070	.020	75	944	--
26...	.170	.040	.35	.40	.57	.140	.060	.020	45	34	--
JUL											
21...	.260	.090	.51	.60	.85	.070	.050	.020	15	2.5	--
AUG											
25...	--	--	.32	.40	.52	--	.040	--	13	.26	--

ARKANSAS RIVER BASIN

07247800 HOLSON CREEK AT SUMMERFIELD, OKLAHOMA

LOCATION.--Lat 34°52'46", long 94°51'11", in SW1/4NW1/4, sec. 26, T.5 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge, 1.4 mi east of Summerfield, Oklahoma.

DRAINAGE AREA.--71.6 mi².

PERIOD OF RECORD.--December 1991 to September 1992.

REMARKS.--Samples were collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, ;non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD WATER UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
DEC 1991											
11...	1410	1028	80020	77	36	6.8	13.0	750	10.2	98	11
11...	1410	--	80020	77	--	--	--	--	--	--	--
MAR 1992											
10...	1330	1028	80020	64	48	7.2	12.5	760	11.0	104	10
MAY											
26...	1715	1028	80020	42	43	6.9	19.0	748	8.4	92	13
JUN											
25...	1230	1028	80020	32	41	6.9	24.5	746	7.0	86	13
JUL											
22...	1045	1028	80020	5.6	51	6.7	27.0	750	6.6	84	--
22...	1115	1028	1028	5.6	51	6.7	27.0	750	5.8	74	--
22...	1120	1028	1028	5.6	51	6.7	27.0	750	6.2	79	--
22...	1124	1028	1028	5.6	51	6.7	27.0	750	6.4	82	--
22...	1128	1028	1028	5.6	51	6.8	27.0	750	6.4	82	--
22...	1133	1028	1028	5.6	51	6.7	27.0	750	6.4	82	--
22...	1136	1028	1028	5.6	51	6.7	27.0	750	6.5	83	--
22...	1140	1028	1028	5.6	51	6.7	27.0	750	6.4	82	--
AUG											
24...	1115	1028	80020	4.4	51	7.1	25.5	--	7.3	--	--

DATE	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (70507)	PHOS-PHORUS ORTHO DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC 1991											
11...	0	<0.050	<0.010	0.38	0.40	0.010	<0.010	0.010	3	0.63	--
MAR 1992											
1 ...	0	< .050	.010	--	< .20	< .010	< .010	< .010	5	.86	100
MAY											
26...	0	< .050	.040	.27	.30	.050	.010	.010	12	1.4	--
JUN											
25...	E0	< .050	.020	--	< .20	.040	< .010	< .010	5	.43	--
JUL											
22...	--	< .050	.090	.52	.60	.030	.010	< .010	6	.09	--
AUG											
24...	--	< .050	.040	.27	.30	< .010	.020	.020	10	.12	--

STREAMFLOW

07249400 James Fork near Hackett, Arkansas

LOCATION.--Lat 35°09'45", long 94°04'25", in NW¹/₄NW¹/₄, sec.34, T.6 N., R.32 W., Sebastian County, near left bank on downstream side of bridge on State Highway 45, 1.7 mi south of Hackett, 2.0 mi downstream from Elder Branch, 2.0 mi upstream from small tributary, and 3.6 mi upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 mi²

AVERAGE DISCHARGE.--34 years, 141 ft³/s.

EXTREMES.--April 1958 to current year: Maximum discharge, 30,000 ft³/s May 14, 1968; no flow at times.

REMARKS.--Records good.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	14,960	6,480	3.0	483	29,670
November	11,448	2,030	73	382	22,710
December	16,683	2,990	111	538	33,090
January	4,650	655	70	150	9,220
February	2,105	150	37	72.6	4,180
March	2,180	153	41	70.3	4,320
April	1,539	353	14	51.3	3,050
May	1,104	181	12	35.6	2,190
June	4,839	1,050	35	161	9,600
July	1,449	601	14	46.7	2,870
August	342	16	8.2	11.0	678
September	1,891	672	9.8	63.0	3,750
Water Year 1992	63,190	6,480	3.0	173	125,300

STREAMFLOW

07250000 Lee Creek near Van Buren, Arkansas

LOCATION.--Lat 35°29'40", long 94°26'58", in SE¹/₄, sec.21, T.12 N., R.27 E., Indian Meridian, Sequoyah County, Okla., on right bank 300 ft west of Arkansas-Oklahoma State line, 3.2 mi downstream from Webbers Creek, 6.8 mi no².

AVERAGE DISCHARGE.--48 years (1930-36, 1950-91), 521 ft³/s.

EXTREMES.--September 1930 to June 1937, October 1950 to current year: Maximum discharge, 80,600 ft³/s May 6, 1960; no flow at times.

REMARKS.--Records good. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	16,030	4,570	2.2	517	31,800
November	35,149	5,080	272	1,172	69,720
December	39,696	5,370	534	1,281	78,740
January	14,102	624	302	455	27,970
February	10,651	916	181	367	21,130
March	13,532	1,030	219	437	26,840
April	13,150	1,930	171	438	26,080
May	13,168	1,430	88	425	26,120
June	31,352	3,800	296	1,045	62,190
July	9,591	856	145	309	19,020
August	9,964	2,350	9.0	321	19,760
September	2,721	275	7.9	90.7	5,400
Water Year 1992	209,106	5,370	2.2	571	414,800

STREAMFLOW

**07250550 Arkansas River at James W. Trimble Lock and
Dam near Van Buren, Arkansas**

LOCATION.--Lat 35°20'56", long 94°17'54", in sec.28, T.8 N., R.31 W., Sebastian County, in James W. Trimble Lock and Dam control house on right bank, and at mile 308.9.

DRAINAGE AREA.--150,547 mi², of which 22,241 mi² is probably noncontributing.

AVERAGE DISCHARGE.--65 years, 32,750 ft³/s.

EXTREMES.--October 1927 to current year: Maximum discharge, 850,000 ft³/s May 12, 1943; no flow Nov. 2, 1975, Feb. 1, 1981, Oct. 17, 1987

REMARKS.--Records good. Prior to October 1969, published as 07250500 Arkansas River at Van Buren. Beginning Apr. 26, 1970, daily discharge computed from relation between discharge, head, and gate openings. Flow regulated by many locks, dams, and reservoirs upstream. Satellite telemeter at station.

Monthly and yearly discharge

Month	Total (ft ³ /s)	Maximum daily (ft ³ /s)	Minimum daily (ft ³ /s)	Mean (ft ³ /s)	Runoff in acre-feet
October	483,135	93,400	135	15,580	958,300
November	1,359,600	85,600	19,200	45,320	2,697,000
December	1,963,900	132,000	22,600	63,350	3,895,000
January	1,210,600	79,000	11,200	39,050	2,401,000
February	699,000	42,600	1,250	24,100	1,386,000
March	632,670	38,200	80	20,410	1,255,000
April	876,201	59,200	31	29,210	1,738,000
May	1,009,740	56,900	3,390	32,570	2,003,000
June	2,582,500	117,000	25,700	86,080	5,122,000
July	1,907,600	79,300	45,400	61,540	3,784,000
August	1,942,700	108,000	26,300	62,670	3,853,000
September	1,148,100	63,300	12,700	38,270	2,277,000
Water Year 1992	15,815,700	132,000	31	43,210	31,370,000

ARKANSAS RIVER BASIN

07250550 ARKANSAS RIVER AT JAMES W. TRIMBLE LOCK AND DAM NEAR VAN BUREN, ARKANSAS

(National tritium station)

(National stream-quality accounting network station)

PERIOD OF RECORD.--Oct. 1969 to current water year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1969 to Sept. 1981.

WATER TEMPERATURES: Oct. 1969 to Sept. 1972, Mar. 1974 to Sept. 1981.

SUSPENDED SEDIMENT DISCHARGE: Oct. 1970 to Sept. 1981.

INSTRUMENTATION.--Water-quality monitor Dec. 1969 to Sept. 1981.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[Five-digit numbers in parentheses are STORET parameter codes used for computer storage of data; K, non-ideal count; US/CM = microsiemens per centimeter at 25 degrees Celsius; NTU = nephelometric turbidity units; MG/L = milligrams per liter; MM = millimeters; UM-MF = micrometer membrane filter; AC-FT = acre-feet, UG/L = micrograms per liter; T/DAY = tons per day]

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (PER-CENT) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI KF AGAR (COLS. PER 100 ML) (31673)	
DEC	10...	0815	80513	80020	29300	490	7.7	9.5	21	10.4	91	230	170
JAN	22...	1020	80513	80020	24400	525	7.8	2.0	24	12.8	94	34	740
MAR	11...	0730	80513	80020	32000	530	7.9	12.0	13	9.6	89	44	38
JUN	04...	0800	80513	80020	115000	440	7.2	19.5	71	7.6	84	K900	2100
AUG	20...	1130	80513	80020	52100	515	8.1	26.0	28	6.8	84	87	160

DATE	TIME	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARBONATE (MG/L AS CAC03) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION PERCENT RATIO (00932)	SODIUM SORP-TION (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CAC03) (90410)	ALKA-LINITY WAT DIS TOT FET FIELD (MG/L AS CAC03) (00418)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	
DEC	10...	0815	90	35	25	6.8	59	58	3	3.1	67	56	0
JAN	22...	1020	110	32	30	7.4	52	51	2	3.0	76	73	0
MAR	11...	0730	120	30	37	7.8	47	44	2	3.0	91	94	0
JUN	04...	0800	110	25	28	8.5	55	52	2	2.7	78	80	0
AUG	20...	1130	120	42	35	8.7	55	48	2	4.1	95	82	0

DATE	TIME	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	
DEC	10...	0815	68	56	34	94	0.20	4.5	284	262	22500	0.39	0.370
JAN	22...	1020	90	74	37	78	.20	5.6	234	260	15400	.32	.410
MAR	11...	0730	116	95	43	70	.10	1.9	262	268	22600	.36	--
JUN	04...	0800	98	80	41	84	< .10	4.7	278	274	86300	.38	--
AUG	20...	1130	100	82	37	80	.20	7.2	297	279	41800	.40	--

ARKANSAS RIVER BASIN
07250550 ARKANSAS RIVER AT JAMES W. TRIMBLE LOCK AND DAM NEAR
VAN BUREN, ARKANSAS--CONTINUED

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00600)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
DEC												
10...	0815	0.020	0.010	0.370	0.380	0.060	0.070	0.44	0.87	0.350	0.50	0.090
JAN												
22...	1020	.030	.010	.430	.420	.070	.070	.43	.93	.400	.50	.070
MAR												
11...	0730	.020	< .010	.210	.220	.050	.040	.35	.61	.190	.40	.060
JUN												
04...	0800	.040	< .010	.300	.310	.070	.050	.43	.80	.260	.50	.080
AUG												
20...	1130	.020	< .010	.420	.450	.020	.020	.48	.92	.400	.50	.100

DATE	TIME	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
DEC											
10...	0815	0.040	0.050	0.030	--	--	--	--	--	--	--
JAN											
22...	1020	.030	.070	.040	70	67	<3	120	<4	23	<10
MAR											
11...	0730	< .010	.030	< .010	130	65	<3	110	<4	3	<10
JUN											
04...	0800	.040	.090	.030	30	67	<3	83	5	1	<10
AUG											
20...	1130	.060	.060	.050	30	81	<3	38	<4	2	<10

DATE	TIME	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
DEC									
10...	0815	--	--	--	--	--	21	1660	70
JAN									
22...	1020	3	<1	<1.0	230	<6	19	1250	98
MAR									
11...	0730	7	<1	<1.0	250	<6	17	1470	64
JUN									
04...	0800	2	<1	<1.0	240	<6	314	97500	85
AUG									
20...	1130	1	<1	<1.0	280	<6	38	5350	83